FORMAT and FILE SPECIFICATIONS

CALIFORNIA CORONARY ARTERY BYPASS GRAFT (CABG) OUTCOMES REPORTING PROGRAM (CCORP)
Version 3.0

January 2008

State of Calfornia
Office of Statewide Health Planning and Development (OSHPD)
Healthcare Outcomes Center
400 R Street, Room 250
Sacramento, CA 95811
(916) 326-3861

CALIFORNIA CORONARY ARTERY BYPASS GRAFT (CABG)
OUTCOMES REPORTING PROGRAM (CCORP)

CABG Data Reporting Requirements

All state-licensed California hospitals performing coronary artery bypass graft (CABG) surgeries must submit every CABG record to CCORP. CCORP is charged with the collection of isolated and non-isolated CABG cases, CABG + Valve cases and CABG + Other cases. Hospitals must comply with the format and specifications for CCORP data submissions in order for data acceptance.

All hospitals submitting data to CCORP must comply with the format and specifications noted in this document, except those using the CCORP data collection tool, provided by OSHPD.

Beginning with the January through June 2008 data submission, hospitals must submit to CCORP a test report if **any** of the following conditions are met:

- There is a change in the data requirements in CCORP regulations Section 97174 or in the format and file specifications in Section 97182
- A hospital is using a data collection tool different from the one used in the prior data collection period
- A hospital using an STS approved software changes to a different STS software program (ex: hospital currently using Axis Clinical and changes to Goodroe)
- A hospital does not use the CCORP data collection tool

The hospital should provide CCORP the test report 90 days prior to the due date for the hospital's next report. Each hospital is required to demonstrate compliance with the appropriate format and file specifications **before** CCORP will accept its file for the report period. CCORP will notify the hospital whether the submitted test report met the data requirements in the sections noted above.

Questions regarding CCORP regulations can be directed to Holly Hoegh at (916) 326-3868 or HHoegh@oshpd.ca.gov. Questions regarding data submission format and file specifications can be directed to Denise O'Neill at (916) 326-3865 or DOneill@oshpd.ca.gov

STANDARD FORMAT AND SPECIFICATIONS FOR CCORP DATA SUBMISSION

STANDARD RECORD FORMAT

Deviation from the standard record format will not be accepted.

- Data submitted on a CD, diskette or secure email transmission.
- The data file must be submitted as a comma-delimited text file with the extension of ".csv"
- Standard ASCII character coding.
- Data submitted for one hospital and one report period per file.
- Labels (column headers) identifying each data element are in the first row of data.
- Data elements are listed in proper export order

ADDITIONAL CODING STANDARDS

Harvest coding accepted for STS software users. In-house developed software should use harvest coding for reporting data to CCORP.

REFERENCES

Format indicates data type and data length. Data type is defined as:

- Alpha
- Numeric
- Alphanumeric
- Date (mm/dd/yyyy)

STANDARD FORMAT AND SPECIFICATIONS
CCORP DATA SUBMISSIONS

Data Element Specifications and Export Order
Version 3.0

1. MEDICAL RECORD NUMBER

Header/Short Name:	**MedRecN**
Data Length:	12
Data Type:	Alphanumeric
Harvest Coding	N/A
Valid Values:	Free text

Definition: Patient medical record number at the hospital where surgery was performed. This field should be collected in compliance with state/local privacy laws.

2. ISOLATED CABG**

Header/Short Name:	**isocabg**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: The patient's surgery is defined as follows: Answer 'No' if any of the procedures listed in Subsection (a)(2)(C)(i) was performed during coronary artery bypass graft surgery.

(i) When any of the procedures listed in this Subsection is performed concurrently with the coronary artery bypass surgery, the surgery **will be considered non-isolated** and the data element coded 'No.' It is not possible to list all procedures because cases can be complex and clinical definitions are not always precise. When in doubt, the data abstractor should first seek an opinion from the responsible surgeon and then consult CCORP.
    (a) Valve repairs or replacements
    (b) Operations on structures adjacent to heart valves (papillary muscle, chordae tendineae, traebeculae carneae cordis, annuloplasty, infundibulectomy)
    (c) Ventriculectomy
    (d) Repair of atrial and ventricular septa, excluding closure of patent foramen ovale

(e) Excision of aneurysm of heart
(f) Head and neck, intracranial endarterectomy
(g) Other open heart surgeries, such as aortic arch repair, pulmonary endarterectomy
(h) Endarterectomy of aorta
(i) Thoracic endarterectomy (endarterectomy on an artery outside the heart)
(j) Heart transplantation
(k) Repair of certain congenital cardiac anomalies, excluding closure of patent foramen ovale (e.g., tetralology of fallot, atrial septal defect (ASD), ventricular septal defect (VSD), valvular abnormality)
(l) Implantation of cardiomyostimulation systems. NOTE: Refers to cardiomyoplasty systems only; not other heart-assist systems such as pacemakers or internal cardiac defibrillators (ICDs)
(m) Any aortic aneurysm repair (abdominal or thoracic)
(n) Aorta-subclavian-carotid bypass
(o) Aorta-renal bypass
(p) Aorta-iliac-femoral bypass
(q) Caval-pulmonary artery anastomosis
(r) Extracranial-intracranial (EC-IC) vascular bypass
(s) Coronary artery fistula
(t) Mastectomy for breast cancer (not simple breast biopsy)
(u) Amputation of any extremity (e.g., foot or toe)
(v) Resection of a lobe or segment of the lung (e.g., lobectomy or segmental resection of lung). Does not include simple biopsy of lung nodule in which surrounding lung is not resected, biopsy of a thoracic lymph node, or excision or stapling of an emphysematous bleb.

(ii) If a procedure listed in this subsection is performed concurrently with the coronary artery bypass surgery, the surgery **will be considered an isolated CABG** and the data element coded 'Yes,' unless a procedure listed in Subsection (a)(2)(C)(i) is performed during the same surgery. These particular procedures are listed because the Office has received frequent questions regarding their coding.
(a) Transmyocardial laser revascularization (TMR)
(b) Pericardiectomy and excision of lesions of heart
(c) Repair/restoration of the heart or pericardium
(d) Coronary endarterectomy
(e) Pacemakers
(f) Internal cardiac defibrillators (ICDs)

(g) Fem-fem cardiopulmonary bypass (a form of cardiopulmonary bypass that should not be confused with aortofemoral bypass surgery listed in Subsection (a)(2)(C)(i))
(h) Thymectomy
(i) Thyroidectomy
(j) All Maze procedures, surgical or catheter

3. DATE OF SURGERY

Header/Short Name:	**SurgDt**
Data Length:	8
Data Type:	Numeric (mm/dd/yyyy)
Harvest Coding	N/A
Valid Values:	Between admission and computer system date

Definition: Indicate the date of CABG surgery (the date the patient enters the operating room).

Special Instruction: Single-digit months and days must include a preceding zero.

4. DATE OF BIRTH

Header/Short Name:	**DOB**
Data Length:	8
Data Type:	Numeric (mm/dd/yyyy)
Harvest Coding	N/A
Valid Values:	Before computer system date

Definition: Indicate the patient's date of birth using 4-digit format for year. This field should be collected in compliance with state/local privacy laws.

Special Instruction: Single-digit months and days must include a preceding zero.

5. PATIENT AGE

Header/Short Name:	**Age**
Data Length:	3
Data Type:	Numeric
Harvest Coding	N/A
Valid Values:	Calculated by hospital/user (between 18 – 100)

Definition: Patient age in years, at time of surgery. This should be calculated from the Date of Birth and the Date of Surgery, according to convention used in the USA (the number of birth date anniversaries reached by the date of surgery). If age is less than 18, the data record will be accepted into the database, but will not be included in the national analysis report

6. SEX

Header/Short Name:	**Gender**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Male; 2 = Female
Valid Values:	Male; Female

Definition: Indicate patient's sex at birth as either male or female.

7. RACE - WHITE

Header/Short Name:	**RaceCaucasian**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes White. This includes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

8. RACE – BLACK/AFRICAN AMERICAN

Header/Short Name:	**RaceBlack**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Black/African American. This includes a person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American".

9. RACE - ASIAN

Header/Short Name:	**RaceAsian**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Asian. This includes a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

10. RACE – AMERICAN INDIAN/ALASKAN NATIVE

Header/Short Name:	**RaceNativeAm**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes American Indian/Alaskan Native. This includes a person having origins in any of the original peoples of North and South American (including Central America), and who maintains tribal affiliation or community attachment.

11. RACE – NATIVE HAWAIIAN/PACIFIC ISLANDER

Header/Short Name:	**RacNativePacific**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Native Hawaiian/Pacific Islander. This includes a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

12. RACE - OTHER

Header/Short Name:	**RaceOther**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient's race, as determined by the patient or family, includes any other race.

13. HISPANIC OR LATINO ETHNICITY

Header/Short Name:	**Ethnicity**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate if the patient is of Hispanic or Latino ethnicity as determined by the patient/family. Hispanic or Latino ethnicity includes patient report of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

14. DATE OF DISCHARGE

Header/Short Name:	**DischDt**
Data Length:	8
Data Type:	Numeric (mm/dd/yyyy)
Harvest Coding	N/A
Valid Values:	Between surgery and computer system date

Definition: Patient date of discharge from the hospital (acute care). If the patient died in the hospital, the discharge date is the date of death.

Special Instruction: Single-digit months and days must include a preceding zero.

15. DISCHARGE STATUS

Header/Short Name:	**MtDCStat**
Data Length:	1
Data Type:	Alpha
Harvest Coding	1 = Alive; 2 = Dead
Valid Values:	Alive; Dead

Definition: Patient status upon discharge from the hospitalization in which surgery occurred.

16. DATE OF DEATH

Header/Short Name:	**MtDate**
Data Length:	8
Data Type:	Numeric (mm/dd/yyyy)
Harvest Coding	N/A
Valid Values:	Date of discharge or between date of discharge and computer system date

Definition: Patient date of death.

Special Instruction: Single-digit months and days must include a preceding zero.

17. RESPONSIBLE SURGEON NAME** (3 SEPARATE FIELDS)

A) Surgeon Last Name
B) Surgeon First Name
C) Surgeon Middle Initial

Header/Short Name:	**SurgLname; SurgFname; SurgMI**
Data Length:	25; 20; 1 (respectively)
Data Type:	Alpha
Harvest Coding	N/A
Valid Values:	Free text

Definition: The responsible surgeon is the surgeon as defined in Section 97170.

18. RESPONSIBLE SURGEON CALIFORNIA LICENSE NUMBER**

Header/Short Name:	**surglicnum**
Data Length:	8
Data Type:	Alphanumeric
Valid Values:	Free text

Definition: California physician license number of responsible surgeon, assigned by the Medical Board of California of the Department of Consumer Affairs.

19. HEIGHT (cm)

Header/Short Name:	**HeightCm**
Data Length:	4
Data Type:	Numeric
Harvest Coding	N/A
Valid Values:	20.0 – 251.0

Definition: Height of the patient in centimeters.

20. WEIGHT (kg)

Header/Short Name:	**WeightKg**
Data Length:	4
Data Type:	Numeric
Harvest Coding	N/A
Valid Values:	10.0 – 250.0

Definition: Weight of the patient in kilograms closest to the date of surgery.

21. DIABETES

Header/Short Name:	**Diabetes**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: The patient has a history of diabetes, regardless of duration of disease or need for anti-diabetic agents. Includes on admission or preoperative diagnosis. Does not include gestational diabetes.

22. HYPERTENSION

Header/Short Name:	**Hypertn**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: The patient has a diagnosis of hypertension, documented by one of the following:

(i) Documented history of hypertension diagnosed and treated with medication, diet and/or exercise.
(ii) Prior documentation of blood pressure >140 mmHg systolic or 90 mmHg diastolic for patients without diabetes or chronic kidney disease, OR prior documentation of blood pressure >130 mmHg systolic or 80 mmHg diastolic on at least 2 occasions for patients with diabetes or chronic kidney disease.
(iii) Currently on pharmacologic therapy to control hypertension

23. INFECTIOUS ENDOCARDITIS

Header/Short Name:	**InfEndo**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of infectious endocarditis documented by one of the following: positive blood cultures, vegetation on echocardiography and/or other diagnostic modality, or documented history of infectious endocarditis.

24. PERIPHERAL ARTERIAL DISEASE

Header/Short Name:	**PVD**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of peripheral arterial disease (includes upper and lower extremity, renal, mesenteric, and abdominal aortic systems). This can include: 1) claudication, either with exertion or at rest, 2) amputation for arterial vascular insufficiency, 3) vascular reconstruction, bypass surgery, or percutaneous intervention to the extremities (excluding dialysis fistulas and vein stripping), 4) documented aortic aneurysm with or without repair, 5) positive noninvasive test (e.g., ankle brachial index =<0.9, ultrasound, magnetic resonance or computed tomography imaging of >50% diameter stenosis in any peripheral artery, i.e. renal, subclavian, femoral, iliac). Peripheral arterial disease excludes disease in the carotid or cerebrovascular arteries.

25. CEREBROVASCULAR DISEASE

Header/Short Name:	**CVD**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has CVD, documented by any one of the following: CVA (symptoms >24 hours after onset, presumed to be from vascular etiology); TIA (recovery within 24 hours); non-invasive carotid test with >79% diameter occlusion; or prior carotid surgery. Does not include neurological disease processes such as metabolic and/or anoxic ischemic encephalopathy.

26. CVD TYPE – UNRESPONSIVE COMA

Header/Short Name:	**CVDComa**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of Unresponsive Coma greater than 24 hours: patient experienced complete mental unresponsiveness and no evidence of psychological or physiologically appropriate responses to stimulation.

27. CVD TYPE - TIA

Header/Short Name:	**CVDTIA**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of a Transient Ischemic Attack (TIA): patient has a history of loss of neurological function that was abrupt in onset but with complete return of function within 24 hours.

28. CVD TYPE – NON INVASIVE >75 %

Header/Short Name:	**CVDNInvas**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of Non-invasive/invasive carotid test with greater than 75% occlusion.

29. CVD TYPE – PRIOR CAROTID SURGERY

Header/Short Name:	**CVDPCarSurg**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of previous carotid artery surgery and/or stenting.

30. CEREBROVASCULAR ACCIDENT

Header/Short Name:	**CVA**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a history of stroke (i.e. any confirmed neurological deficit of abrupt onset caused by a disturbance in cerebral blood supply) that did not resolve within 24 hours.

31. CEREBROVASCULAR ACCIDENT TIMING

Header/Short Name:	**CVAWhen**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Recent (<=2 wk.); 2 = Remote (>2 wk.)
Valid Values:	Recent (<=2 wk.); Remote (>2 wk.)

(Continued next page)

Definition: Indicate when the CVA events occurred. Events occurring within two weeks of the surgical procedure are considered recent (<=2 weeks); all others are considered remote (>2 weeks).

32. CHRONIC LUNG DISEASE

Header/Short Name:	**ChrLungD**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = No; 2 = Mild; 3 = Moderate; 4 = Severe
Valid Values:	No; Mild; Moderate; Severe

Definition: If the patient has chronic lung disease, the severity level according to the following classification is:

(i) No: There is no chronic lung disease present.
(ii) Mild: Forced expiratory volume in one second (FEV1) 60% to 75% of predicted, and/or on chronic inhaled or oral bronchodilator therapy.
(iii) Moderate: FEV1 50-59% of predicted, and/or on chronic steroid therapy aimed at lung disease.
(iv) Severe: FEV1 <50% predicted, and/or room air partial pressure of oxygen (pO2) < 60 or room air partial pressure of carbon dioxide (pCO2) > 50.

33. IMMUNOSUPPRESSIVE TREATMENT

Header/Short Name:	**ImmSupp**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has used any form of immunosuppressive therapy within 30 days preceding the operative procedure. This includes, but is not limited to inhaled or systemic steroid therapy and chemotherapy. This does not include topical applications, one time systemic therapy, or preoperative protocol.

34. DIALYSIS

Header/Short Name:	**Dialysis**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: The patient is currently undergoing dialysis.

Special Instructions for STS software users: This is a child field for Renal Failure. CCORP requires the Null to be filled with “No”.

35. LAST CREATININE LEVEL PREOP (mg/dl)

Header/Short Name:	**CreatLst**
Data Length:	3
Data Type:	Numeric
Harvest Coding	N/A
Valid Values:	0.1 - 30.0

Definition: Indicate the creatinine level closest to the date and time prior to surgery. A creatinine level should be collected on all patients for consistency, even if they have no prior history. A creatinine value is a high predictor of a patient's outcome and is used in the predicted risk models.

36. PREVIOUS CORONARY ARTERY BYPASS GRAFT

Header/Short Name:	**PrCAB**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient had a previous coronary artery bypass graft prior to the current admission.

Special Instructions for STS software users: This is a child field for Previous CV Intervention. CCORP requires the Null to be filled with “No”.

37. PREVIOUS VALVE

Header/Short Name:	**PrValve**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient had a previous surgical replacement and/or surgical repair of a cardiac valve. This may also include percutaneous valve procedures.

Special Instructions for STS software users: This is a child field for Previous CV Intervention. CCORP requires the Null to be filled with "No".

38. PRIOR PERCUTANEOUS CORONARY INTERVENTION (PCI)

Header/Short Name:	**POCPCI**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether a previous Percutaneous Cardiac Intervention (PCI) was performed any time prior to this surgical procedure. PCI refers to those treatment procedures that unblock narrowed coronary arteries without performing surgery. PCI may include, but is not limited to: balloon catheter angioplasty, percutaneous transluminal angioplasty (PTCA), rotational atherectomy, directional atherectomy, extraction atherectomy, laser atherectomy and intracoronary stent placement.

Special Instructions for STS software users: This is a child field for Previous CV Intervention. CCORP requires the Null to be filled with "No".

39. INTERVAL FROM PRIOR PCI TO SURGERY

Header/Short Name:	**POCPCIIn**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = <= 6 Hours; 2 = > 6 Hours
Valid Values:	<= 6 Hours; > 6 Hours

Definition: Indicate the interval of time between the previous PCI and the current surgical procedure: <= 6 Hours or > 6 Hours

40. PREVIOUS MYOCARDIAL INFARCTION

Header/Short Name:	**PrevMI**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate if the patient has had at least one documented previous myocardial infarction at any time prior to this surgery. An acute myocardial infarction is evidenced by any of the following:

1. A rise and fall of cardiac biomarkers (preferably troponin) with at least one of the values in the
abnormal range for that laboratory [typically above the 99th percentile of the upper reference limit (URL) for normal subjects] together with at least one of the following manifestations of myocardial ischemia:
    a. Ischemic symptoms;
    b. ECG changes indicative of new ischemia (new ST-T changes, new left bundle branch block, or loss of R wave voltage),
    c. Development of pathological Q waves in 2 or more contiguous leads in the ECG (or equivalent findings for true posterior MI);
    d. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality;
    e. Documentation in the medical record of the diagnosis of acute myocardial infarction based on the cardiac biomarker pattern in the absence of any items enumerated in a-d due to conditions that may mask their appearance (e.g., peri-operative infarct when the patient cannot report ischemic symptoms; baseline left bundle branch block or ventricular pacing)
2. Development of new pathological Q waves in 2 or more contiguous leads in the ECG, with or without symptoms.
3. Imaging evidence of a region with new loss of viable myocardium at rest in the absence of a non-ischemic cause. This can be manifest as:
    a. Echocardiographic, CT, MR, ventriculographic or nuclear imaging evidence of left ventricular thinning or scarring and failure to contract appropriately (i.e., hypokinesis, akinesis, or dyskinesis)
    b. Fixed (non-reversible) perfusion defects on nuclear radioisotope imaging (e.g., MIBI, thallium)
4. Medical records documentation of prior myocardial infarction.

41. MYOCARDIAL INFARCTION TIMING

Header/Short Name:	**MIWhen**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = <=6 Hrs; 2 = >6 Hrs but <24 Hrs; 3 = 1 to 7 Days; 4 = 8 to 21 Days; 5 = >21 Days
Valid Values:	<=6 Hrs; >6 Hrs but <24 Hrs; 1 to 7 Days; 8 to 21 Days; >21 Days

Definition: The time period between the last documented myocardial infarction and the CABG surgery.

42. HEART FAILURE

Header/Short Name:	**CHF**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether, within 2 weeks prior to the initial surgical procedure, a physician has diagnosed that the patient is currently in heart failure (HF). HF can be diagnosed based on careful history and physical exam, or by one of the following criteria:

(i) Paroxysmal nocturnal dyspnea (PND).
(ii) Dyspnea on exertion (DOE) due to heart failure.
(iii) Chest X-Ray (CXR) showing pulmonary congestion.
(iv) Pedal edema or dyspnea and receiving diuretics; or
(v) Pulmonary edema

43. NYHA CLASSIFICATION

Header/Short Name:	**ClassNYH**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Class I; 2 = Class II; 3 = Class III; 4 = Class IV
Valid Values:	Class I; Class II; Class III; Class IV

Definition: Indicate the patient's highest New York Heart Association (NYHA) classification within 2 weeks prior to surgery. NYHA classification represents the overall functional status of the patient in relationship to both heart failure. Choose one of the following:

Class I: Patient has cardiac disease but without resulting limitations of ordinary physical activity. Ordinary physical activity (e.g., walking several blocks or climbing stairs) does not cause undue fatigue, palpitation, dyspnea, or anginal pain. Limiting symptoms may occur with marked exertion.

Class II: Patient has cardiac disease resulting in slight limitation of ordinary physical activity. Patient is comfortable at rest. Ordinary physical activity such as walking more than two blocks or climbing more than one flight of stairs results in limiting symptoms (e.g., fatigue, palpitation, dyspnea, or anginal pain).

Class III: Patient has cardiac disease resulting in marked limitation of physical activity. Patient is comfortable at rest. Less than ordinary physical activity (e.g., walking one to two level blocks or climbing one flight of stairs) causes fatigue, palpitation, dyspnea, or anginal pain.

Class IV: Patient has dyspnea at rest that increases with any physical activity. Patient has cardiac disease resulting in inability to perform any physical activity without discomfort. Symptoms may be present even at rest. If any physical activity is undertaken, discomfort is increased.

44. STS CARDIOGENIC SHOCK

Header/Short Name:	**CarShock**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient was, at the time of procedure, in a clinical state of hypoperfusion sustained for greater than 30 minutes, according to either of the following criteria:

1. Systolic BP < 80 and/or Cardiac Index < 1.8 despite maximal treatment;
2. IV inotropes and/or IABP necessary to maintain Systolic BP > 80 and/or CI > 1.8.

45. RESUSCITATION

Header/Short Name:	**Resusc**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient required cardiopulmonary resuscitation within one hour before the start of the operative procedure.

46. ARRHYTHMIA

Header/Short Name:	**Arrhyth**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Whether there is a history of preoperative arrhythmia (sustained ventricular tachycardia, ventricular fibrillation, atrial fibrillation, atrial flutter, third degree heart block) that has been treated with any of the following treatment modalities prior to the CABG surgery:

1. ablation therapy
2. AICD
3. pacemaker
4. pharmacological treatment
5. electrocardioversion

47. ARRHYTHMIA TYPE – VTACH/VFIB

Header/Short Name:	**ArrhyVtach**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether sustained ventricular tachycardia or fibrillation is present within two weeks of the procedure.

48. ARRHYTHMIA TYPE – 3RD DEGREE HEART BLOCK

Header/Short Name:	**ArrhyTHB**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether third degree heart block is present within two weeks of the procedure.

49. ARRHYTHMIA TYPE – AFIB/AFLUTTER

Header/Short Name:	**ArrhyAfib**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether atrial fibrillation or flutter is present within two weeks of the procedure.

50. NUMBER OF DISEASED CORONARY VESSELS

Header/Short Name:	**NumDisV**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = None; 2 = One; 3 = Two; 4 = Three
Valid Values:	None; One; Two; Three

Definition: Indicate the number of diseased major native coronary vessel systems: LAD system, Circumflex system, and/or Right system with >=50% narrowing of any vessel preoperatively.

51. LEFT MAIN DISEASE (% Stenosis)

Header/Short Name:	**Lmstenpct**
Data Length:	3
Data Type:	Numeric
Valid Values:	0 – 100

Definition: Percentage of compromise of vessel diameter in any angiographic view.

52. EJECTION FRACTION DONE

Header/Short Name:	**HDEFD**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the Ejection Fraction was measured prior to the induction of anesthesia.

53. EJECTION FRACTION (%)

Header/Short Name:	**HDEF**
Data Length:	3
Data Type:	Numeric
Valid Values:	1.0 – 99.0

Definition: Indicate the percentage of the blood emptied from the ventricle at the end of the contraction. Use the most recent determination prior to the surgical intervention documented on a diagnostic report.

54. EJECTION FRACTION METHOD

Header/Short Name:	**HDEFMeth**
Data Length:	1
Data Type:	Numeric
Harvest Coding	2 = LV Gram; 3 = Radionucleotide; 4 = Estimate; 5 = ECHO; 6 = MRI/CT; 9 = Other
Valid Values:	LV Gram; Radionucleotide; Estimate; ECHO; MRI/CT; Other

Definition: Indicate how the Ejection Fraction measurement information was obtained preoperatively.

55. MEAN PA PRESSURE DONE

Header/Short Name:	**HDPAD**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the mean pulmonary artery pressure in mmHg, was recorded from catheterization data or Swan-Ganz catheter BEFORE the induction of anesthesia.

56. PA MEAN

Header/Short Name:	**HDPAMean**
Data Length:	3
Data Type:	Numeric
Valid Values:	1.0 – 99.0

Definition: Indicate the mean pulmonary artery pressure in mmHg, recorded from catheterization data or Swan-Ganz catheter BEFORE the induction of anesthesia.

57. MITRAL INSUFFICIENCY

Header/Short Name:	**VDInsufM**
Data Length:	1
Data Type:	Numeric
Harvest Coding	0 = None; 1 = Trivial; 2 = Mild; 3 = Moderate; 4 = Severe; 5 = N/A
Valid Values:	None; Trivial; Mild; Moderate; Severe

Definition: Indicate whether there is evidence of mitral valve regurgitation. Enter level of valve function associated with highest risk (i.e. worst performance). Enter highest level recorded in chart. If data not available or study suboptimal, enter N/A.

58. INCIDENCE

Header/Short Name:	**Incidenc**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = First cardiovascular surgery; 2 = First re-op cardiovascular surgery; 3 = Second re-op cardiovascular surgery; 4 = Third re-op cardiovascular surgery; 5 = Fourth or more re-op cardiovascular surgery

Valid Values:	First cardiovascular surgery; First re-op cardiovascular surgery; Second re-op cardiovascular surgery; Third re-op cardiovascular surgery; Fourth or more re-op cardiovascular surgery

Definition: Indicate if this is the patient's:

(i) First cardiovascular surgery
(ii) First re-op cardiovascular surgery
(iii) Second re-op cardiovascular surgery
(iv) Third re-op cardiovascular surgery
(v) Fourth or more re-op cardiovascular surgery

59. STATUS OF PROCEDURE

Header/Short Name:	**Status**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Elective; 2 = Urgent; 3 = Emergent; 4 = Emergent Salvage
Valid Values:	Elective; Urgent; Emergent; Emergent Salvage

Definition: Indicate the clinical status of the patient prior to entering the operating room:

Elective: The patient's cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.

Urgent: Procedure required during same hospitalization in order to minimize chance of further clinical deterioration. Examples include but are not limited to: Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (NTG) or rest angina.

Emergent: Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention.

The patient's clinical status includes any of the following:

a. Ischemic dysfunction (any of the following): (1) Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or IABP)); (2) Acute Evolving Myocardial Infarction within 24 hours before surgery; or (3) pulmonary edema requiring intubation.

b. Mechanical dysfunction (either of the following): (1) shock with circulatory support; or (2) shock without circulatory support.

Emergent Salvage: The patient is undergoing CPR en route to the OR or prior to anesthesia induction.

60. EMERGENT REASON

Header/Short Name:	**EmergRsn**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Shock with circulatory support; 2 = Shock without circulatory support; 3 = Pulmonary edema requiring intubation 4 = AEMI 5 = Ongoing Ischemia 6 = Valve Dysfunction; 7 = Aortic Dissection 8 = Angiographic Accident 9 = Cardiac Trauma
Valid Values:	Shock with circulatory support; Shock without circulatory support; Pulmonary edema requiring intubation; Acute Evolving Myocardial Infarction within 24 hours before surgery; Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or IABP); Valve Dysfunction - Acute Native or Prosthetic; Aortic Dissection; Angiographic Accident; Cardiac Trauma

Definition: Indicate which one of the above valid values applies as the reason why the patient had Emergent Status? (Select one valid value). Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or (unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention.

61. CPB UTILIZATION

Header/Short Name:	**CPBUtil**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = None; 2 = Combination; 3 = Full
Valid Values:	None; Combination; Full

Definition: Indicate the level of CPB or coronary perfusion used during the procedure:

(i) None: no CPB or coronary perfusion used during the procedure

(ii) Combination: with or without CPB and/or with or without coronary perfusion at any time during the procedure (capture conversions from off-pump to on-pump only)

(a) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> CPB

(b) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion

(c) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion -> conversion to -> CPB

(ii) Full: CPB or coronary perfusion was used for the entire procedure.

62. CPB UTILIZATION COMBINATION

Header/Short Name:	**CPBCmb**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Planned; 2 = Unplanned
Valid Values:	Planned; Unplanned

Definition: Whether the combination procedure from off-pump to on-pump was a planned or an unplanned conversion:

(i) Planned: the surgeon intended to treat with any of the combination options described in "CPB utilization"

(ii) Unplanned: the surgeon did not intend to treat with any of the combination options described in "CPB utilization".

63. CARDIOPLEGIA

Header/Short Name:	**Cplegia**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether cardioplegia was used.

64. INTERNAL MAMMARY ARTERY(IES) USED AS GRAFTS

Header/Short Name:	**IMAArtUs**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Left IMA; 2 = Right IMA; 3 = Both IMAs; 4 = No IMA
Valid Values:	Left IMA; Right IMA; Both IMAs; No IMA

Definition: Indicate which, if any, Internal Mammary Artery(ies) (IMA) used for grafts.

(i) Left IMA
(ii) Right IMA
(iii) Both IMAs
(iv) No IMA

65. RADIAL ARTERY USED

Header/Short Name:	**RadArtUs**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = No Radial; 2 = Left Radial; 3 = Right Radial; 4 = Both Radials
Valid Values:	No Radial; Left Radial; Right Radial; Both Radials

Definition: Indicate which radial artery(ies) was/were used for grafts:

(i) No Radial artery
(ii) Left Radial artery
(iii) Right Radial artery
(iv) Both Radial arteries

66. LEFT ANTERIOR DESCENDING ARTERY BYPASSED**

Header/Short Name:	**LADByP**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether any part of the Left Anterior Descending artery (Proximal; Mid; Distal; Diagonal) was bypassed for this surgical intervention.

67. VALVE PROCEDURE

Header/Short Name:	**OpValve**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether a surgical procedure was done on the Aortic, Mitral, Tricuspid or Pulmonic valves.

68. AORTIC VALVE PROCEDURE

Header/Short Name:	**OpAortic**
Data Length:	2
Data Type:	Numeric
Harvest Coding	1 = No 2 = Replacement 3 = Repair/Reconstruction 4 = Root Reconstruction with Valve Conduit 5 = Root Reconstruction with Valve Sparing 7 = Resection Sub-Aortic Stenosis 8 = Replacement + Aortic Graft Conduit (not a valve conduit) 9 = Resuspension Aortic Valve with Replacement of Ascending aorta 10 = Resuspension Aortic Valve without Replacement of Ascending aorta
Valid Values:	No; Replacement; Repair/Reconstruction; Root Reconstruction with Valve Conduit; Replacement + Aortic Graft Conduit (not a valve conduit); Root Reconstruction w/ Valve Sparing; Resuspension Aortic Valve with Replacement of Ascending aorta; Resuspension Aortic Valve without Replacement of Ascending aorta; Resection Sub-Aortic Stenosis

Definition: Indicate whether a surgical procedure was done or not done on the Aortic Valve. Select one of the above.

69. MITRAL VALVE PROCEDURE

Header/Short Name:	**OpMitral**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = No 2 = Annuloplasty only 3 = Replacement 4 = Reconstruction with Annuloplasty 5 = Reconstruction without Annuloplasty
Valid Values:	No; Annuloplasty only; Replacement; Reconstruction with Annuloplasty; Reconstruction without Annuloplasty

Definition: Indicate whether a surgical procedure was done or not done on the Mitral Valve. Select one of the above.

70. TRICUSPID VALVE PROCEDURE

Header/Short Name:	**OpTricus**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = No 2 = Annuloplasty only 3 = Replacement 4 = Reconstruction with Annuloplasty 5 = Reconstruction without Annuloplasty 6 = Valvectomy
Valid Values:	No; Annuloplasty only; Replacement; Reconstruction with Annuloplasty; Reconstruction without Annuloplasty; Valvectomy

Definition: Indicate whether a surgical procedure was done or not done on the Tricuspid Valve. Select one of the above.

71. PULMONIC VALVE PROCEDURE

Header/Short Name:	**OpPulm**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = No 2 = Replacement 3 = Reconstruction
Valid Values:	No; Replacement; Reconstruction

Definition: Indicate whether a surgical procedure was done or not done on the Pulmonic Valve. Select one of the above.

72. REOPERATION FOR BLEED/TAMPONADE

Header/Short Name:	**COpReBld**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient returned to the operating room for mediastinal bleeding/tamponade.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

73. REOPERATION FOR GRAFT OCCLUSION

Header/Short Name:	**COpReGft**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient returned to the operating room for coronary graft occlusion due to acute closure, thrombosis, technical or embolic origin.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

74. DEEP STERNAL WOUND INFECTION

Header/Short Name:	**CIStDeep**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether patient, within 30 days postoperatively, had a deep sternal infection involving muscle, bone, and/or mediastinum REQUIRING OPERATIVE INTERVENTION.

Must have ALL of the following conditions:

(i) Wound opened with excision of tissue (I&D) or re-exploration of mediastinum

(ii) Positive culture

(iii) Treatment with antibiotics

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

75. POSTOPERATIVE STROKE

Header/Short Name:	**CNStrokP**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient has a postoperative stroke (i.e., any confirmed neurological deficit of abrupt onset caused by a disturbance in cerebral blood supply) that did not resolve within 24 hours.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

76. CONTINUOUS COMA >= 24 HOURS

Header/Short Name:	**CNComa**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: A new postoperative coma that persists for at least 24 hours secondary to anoxic/ischemic and/or metabolic encephalopathy, thromboembolic event or cerebral bleed.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

77. PROLONGED VENTILATION

Header/Short Name:	**CPVntLng**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient had prolonged pulmonary ventilator > 24 hours. Include (but not limited to) causes such as ARDS, pulmonary edema, and/or any patient requiring mechanical ventilation > 24 hours postoperatively.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

78. POSTOPERATIVE RENAL FAILURE

Header/Short Name:	**CRenFail**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Acute or worsening renal failure resulting in one or more of the following:

(i) Increase of serum creatinine to > 2.0 and 2x most recent preoperative creatinine level.
(ii) A new requirement of dialysis postoperatively.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

79. POSTOPERATIVE DIALYSIS REQUIREMENT

Header/Short Name:	**CRenDial**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient had a new requirement for dialysis postoperatively, which may include hemodialysis, peritoneal dialysis, and any form of ultrafiltration.

Special Instructions for STS software users: CCORP requires the Null to be filled with “No”. This is a child field for Complications.

80. POSTOPERATIVE ATRIAL FIBRILLATION

Header/Short Name:	**COtAFib**
Data Length:	1
Data Type:	Numeric
Harvest Coding	1 = Yes; 2 = No
Valid Values:	Yes; No

Definition: Indicate whether the patient had a new onset of atrial fibrillation/flutter (AF) requiring treatment. Does not include recurrence of AF which had been present preoperatively.

Special Instructions for STS software users: CCORP requires the Null to be filled with “No”. This is a child field for Complications.

81. FACILITY IDENTIFICATION NUMBER**

Header/Short Name:	**hospitalid**
Data Length:	6
Data Type:	Numeric
Valid Values:	Free Text

Definition: The six-digit facility identification number assigned to each hospital by the Office, as defined in Section 97170.

NOTE: Variables denoted by ** are non-STS variables in origin.